

REMARKS

Claims 1-19 are currently pending in the application. In an Office Action dated October 15, 2004 ("Office Action"), the Examiner rejected Claims 1, 2, and 19 under 35 U.S.C. § 102(e) as being anticipated by Hockaday et al., U.S. Patent No. 6,630,266B2 ("Hockaday") rejected Claims 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Hockaday in view of Vieira et al., U.S. Patent No. 5,098,477 ("Vieira"), rejected Claims 10 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Hockaday and Vieira in view of Bauer, U.S. Patent No. 4,523,852 ("Bauer"), rejected Claims 12-15 under 35 U.S.C. § 103(a) as being unpatentable over Hockaday and Vieira and in further view of Bauer, and rejected Claims 8 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Hockaday in view of Beecher et al., U.S. Patent No. 5,192,984 ("Beecher"). The Examiner objected to Claims 3-5 and 16-18 as being dependent on a rejected base claim, but indicated these claims would be allowable if rewritten in independent form.

On December 14th, Applicant's representative discussed the current application with the Examiner, and is responding, in the current response, both to the Office Action as well as to the telephone discussion on December 14th. In the telephone discussion, the Applicant's representative and the Examiner agreed that the principal of operation of the current invention is quite different from that of the system and technique disclosed in Hockaday. Applicant's representative has, accordingly, amended Claims 1, 12, and 19, in the above Amendment, in order to more clearly point out that distinction. As discussed in the telephone discussion, and as Applicant's representative discussed in a prior Response, Hockaday's system employs a selectively permeable fuel tank wall so that a water/methanol fuel mixture within a fuel tank delivers methanol to a methanol-consuming system or device, while retaining water in the fuel tank. Thus, as the methanol fuel is consumed, the volume of fuel in the fuel tank decreases. As pointed out in Hockaday, beginning on line 45 of column 4, as the fuel is used, the fuel tank may mechanically collapse, due to the decrease in volume of the water/fuel mixture. Hockaday does discuss using colored dyes as fuel indicators, but Hockaday clearly indicates, beginning on line 51 of column 4, that the fuel remaining in the fuel tank darkens, due to an increase in concentration of the dye in the decreasing volume of water/methanol fuel.

By contrast, as clearly discussed in the current application, the current invention involves a dye or dye mixture that changes color in response to decreasing methanol concentration of a constant volume of fuel in a fuel reservoir. In other words, as clearly discussed in the current application, and as shown in Figures 3A-B of the current application, the dyes used as color indicators for fuel concentration claimed in Claims 1, 12, 19, and claims that depend from Claims 1, 12, and 19, undergo electrochemical changes in response to a change in methanol concentration, which, in turn, change the absorption or emission characteristics of the dye to change the color of the dye. Although the single sentence concerning dyes and Hockaday is ambiguous, to some extent, it is clear from the passage that Hockaday's dye does not actually undergo a color change, but rather becomes more concentrated, and thus affects the brightness, or light transparency, of the fuel solution.

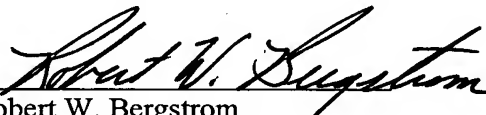
In Applicant's representative's opinion, Applicant's original Claim 1 did not read on Hockaday. In the original Claim 1, Applicant claimed "a dye mixture responsive to fuel concentration within the volume of the fuel solution." The phrase "responsive to fuel concentration" means exactly what it says – namely, that the dye mixture responds to a change in methanol concentration. A changing in the transparency of a dye/fuel solution due to decrease in volume of the solvent, and concomitant increase in concentration of the dye solute is not, in Applicant's representative's opinion, a system in which the dye responds to a change in fuel concentration. First, in both Applicant's claimed system and in Hockaday's system, the fuel is methanol, not water. In Hockaday's system, if water was continuously introduced into the fuel tank as methanol diffused out, maintaining a constant volume of fluid in the fuel tank, the brightness, or transparency, of the fluid due to the presence of dye molecules would not change, despite the fact that the fuel concentration may decrease from nearly 100 percent to zero percent. Hockaday's dye is not responsive to fuel concentration, but instead responsive to a change in the volume of the water/fuel mixture within the fuel tank. Applicant's representative respectfully submits that the original Claim 1 clearly distinguished the current invention from Hockaday, and that distinction was clearly pointed out in the prior response.

Finally, again Applicant's representative would like to thank the Examiner for the conditional allowance of Claims 3-5 and 16-18, as well as for the Examiner's time for discussing the current application in the telephone interview on December 14th. In

Applicant's representative's opinion, all the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

The application is now clearly in order for allowance.

Respectfully submitted,
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